

## Supplementary Information

### CuI High Temperature X-ray Diffraction

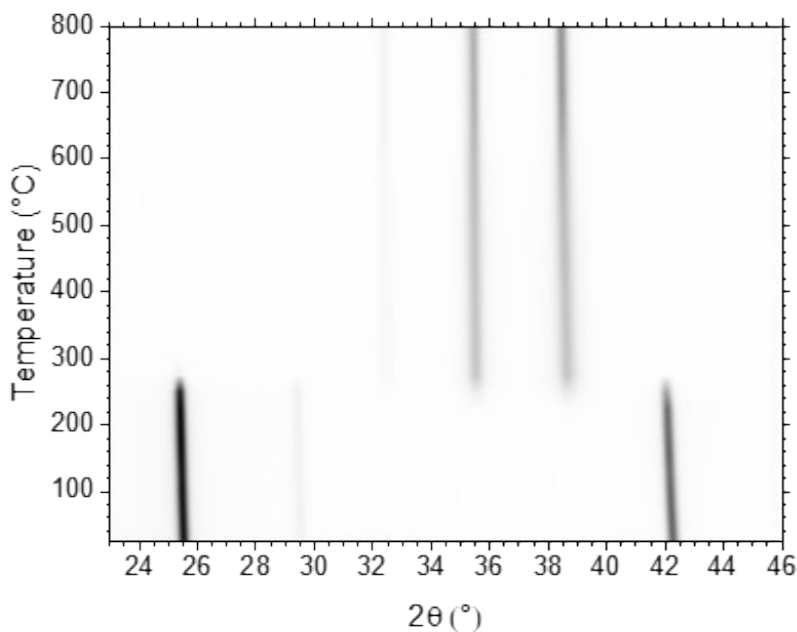


Figure 1: High temperature X-ray diffraction of CuI film while heating the sample. A clear transition visible at around 240°C.

### List of used parts

- Silicon drift diode detector: FAST SDD® Ultra High Performance Silicon Drift Detector <https://www.amptek.com/products/x-ray-detectors/fast-sdd-x-ray-detectors-for-xrf-eds/fast-sdd-silicon-drift-detector>
- Position sensitive detector: Advacam Minipix TPX3 <https://advacam.com/camera/minipix-tpx3>
- Translation stage for height adjustment of the detector: Newport DTS25/M <https://www.thorlabs.com/thorproduct.cfm?partnumber=DTS25/M#ad-image-0>
- Manual slit: Huber Cross Slit Screen 3002.10 <https://www.xhuber.com/en/products/4-accessories/43-beam/slit-screens/manual-versions/300210/>
- 24 W Metal ceramic heater: Newport HT24S <https://www.thorlabs.com/thorproduct.cfm?partnumber=HT24S>
- Thermocouple: Newport TH100PT <https://www.thorlabs.com/thorproduct.cfm?partnumber=TH100PT>